

REMARKS/ARGUMENTS

The specification and claims have been carefully reviewed in the light of the Office Action to which this amendment is responsive. Applicant's attorney wishes to thank the Examiner for the courteous telephone interview held yesterday during which time proposed amendments to claim 35 were discussed, as indicated in the copy of the claim attached hereto as Appendix A which included record support for the amended language. Claim 35 as now presented corresponds to the proposed amended claim, but the claim recitations have been rearranged in a manner that is believed to more clearly reflect the invention. Amendments also have been made to dependent claims in an effort to overcome each of the §112 objections raised in the Office Action.

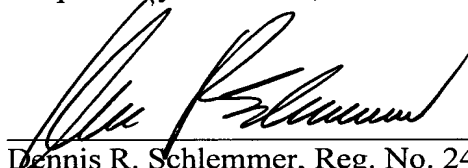
Claims 3-6, 8-10, 15, 35, 37, 39, and 42 have been rejected as being anticipated by Jones (10,051), and claims 36, 38, 40, 41 and 43 have been rejected as being obvious over that reference. Reconsideration of such rejections is respectfully requested in the light of the foregoing amendments. As brought out in the prior prosecution, applicant has disclosed and claimed herein a novel rotary nozzle adapted for high efficiency container cleaning applications. The nozzle assembly includes a rotary nozzle housing or body which is fluid driven through a torque generated by fluid directed through the nozzle housing. In high pressure cleaning, heretofore, the high pressure driving fluid caused the nozzle housing to rotate at such high speeds as to overly atomize the discharging fluid and impede its cleaning effectiveness.

In accordance with the present invention, as set forth in claim 35, the nozzle housing includes (1) at least one spray discharge orifice of a first form that opens outwardly of the cylindrical housing substantially in a radial direction for discharging a predetermined fluid spray pattern in a radial direction as an incident to rotation of pressurized fluid through the housing and rotation of the housing, and (2) a breaking fluid discharge opening having an axis that does not intersect the axis of rotation of the nozzle housing and which is oriented such that the breaking fluid discharge opening opens outwardly of said housing in the direction of circumferential rotation for directing liquid in a manner that retards rotation of the nozzle as an incident to the direction of pressurized fluid through the nozzle housing. Hence, at higher fluid pressures, the rotary speed of the nozzle housing is limited so as to effect a more powerful, larger drop spray discharge from the radial discharge orifices suitable for thorough cleaning of container walls and the like.

In contrast, in Jones the rotary casing B has a plurality of discharge orifices C that each are similarly oriented for directing a discharging liquid in the direction of circumferential rotation that retards movement. Jones provides no suggestion of a rotary spray nozzle having the combination of (1) radial fluid discharge orifices for discharging a predetermined fluid spray pattern in a radial direction and (2) breaking discharge orifices for retarding rotational movement of the rotary housing such that the discharging spray from the radial discharge orifices is suitable for optimum cleaning. Since the remaining claims in issue all depend upon claim 35, for similar reasons they distinguish over the prior art.

From the foregoing, it is believed that the claims as now presented all are directed to features which are neither disclosed by the prior art so as to be in condition for allowance. Accordingly, an early action to that effect is respectfully requested.

Respectfully submitted,



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Date: August 18 , 2005

APPENDIX A

35. (Currently Amended) A nozzle assembly for discharging a fluid for cleaning containers, comprising:

a rotatable nozzle housing having a cylinder chamber,

a first fluid drive for applying a first torque on the nozzle housing and thereby rotating the nozzle housing about a central axis of rotation,

said nozzle housing being formed with a braking fluid discharge opening ~~having an orientation that~~ having an axis that does not intersect the axis of rotation of the nozzle housing (Spec. p. 5, ll. 1-2) and which is oriented such that the braking fluid discharge opening opens outwardly of the said cylindrical housing chamber in the direction of circumferential rotation (Spec. p. 7, ll. 19-21) of the nozzle housing for directing liquid outwardly of said housing to retard the rotation of said nozzle housing as an incident to the direction of pressurized fluid through said nozzle housing and

said nozzle housing being formed with at least one spray discharge orifice of a first form that opens outwardly of said cylindrical housing ~~chamber with an orientation different from said braking fluid discharge opening~~ substantially in a radial direction (Spec. p. 7, ll. 6-7) for discharging a predetermined fluid spray from said rotatable housing in a radial direction (Spec. p. 4, ll. 2-3) as an incident to the direction of pressurized fluid through said housing.